

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/607,678		VOCK ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Mohamed Charioui		2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 2/13/07.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 21-23 and 25-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-23 and 25-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/22/07</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. Applicant cancelled claims 1-20 and 24.

### DETAILED ACTION

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 21 and 27-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli (U.S. 6,148,271) in view of Place et al. (U.S. Patent No. 6,450,953).

**As per claim 21**, Marinelli teaches a base station (i.e. monitor unit) for displaying at least one performance metric (see col. 2, lines 60-65); one or more mobile sensing units for attachment with participants in a competitive event within a competitive event area and for transmitting wireless data representing at least one performance metric (see col. 2, lines 25-30; col. 4, lines 36-48; col. 5, lines 29-55; and Fig. 1); and at least one relay unit for placement proximate to the competitive event area, the at least one relay unit being remote from the mobile sensing units and the base station, for receiving the wireless data representing the at least one performance metric from the sensing units (see col. 2, lines 47-52 and col. 18, lines 35-49).

Marinelli ***does not teach that the*** at least one relay unit ***wirelessly transmits*** the received data to the base station.

Place et al. teach this feature (see col. 4, lines 21-35). It would have been obvious to one having ordinary skill in the art at the invention was made to incorporate

Place et al. teaching into Marinelli's teaching because it would transmit the data wirelessly to the base station. Therefore, the wiring costs and complications of the relay system would be obviated.

**As per claim 27**, Marinelli further teaches a display device electronically coupled to the base station, and wherein the base station displays the at least one performance metric on the display device (see col. 2, lines 53-65).

**As per claim 28**, Marinelli further teaches that the performance metric is at least one selected from the group of rotation, spin, tilt, leaning, acceleration, speed, edge time, distance, drop distance, airtime and g-force (see col. 6, lines 21-34 and col. 3, lines 17-30).

**As per claim 29**, Marinelli further teaches that the performance metric includes a rotation rate or total rotation (see col. 10, lines 34-60).

**As per claim 30**, Marinelli further teaches that the performance metric includes a rotation component (see col. 4, lines 36-48).

**As per claim 31**, Marinelli further teaches that the sensing unit includes an accelerometer (see 2, lines 40-43).

3. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Place et al. and Jones (U.S. 6,292,213).

Marinelli in view of Place et al. teach the system as stated above except that the system comprises at least one camera for capturing at least one image and sending data representing the at least one image to the base station.

Jones teaches this feature (see col. 8, line 44 to col. 9, line 15; col. 6, lines 46-67; and Fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Jones's teaching into Marinelli in view of Place et al.'s invention because images would be captured and sent to the base station to be displayed; therefore, viewers would be able to visually monitor the participant's movements and judge his/her performance.

4. **Claim 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Place et al. and Boyd et al. (U.S. 5,023,727).

Marinelli teaches the system as stated above except that the at least one relay unit includes at least two relay units.

Boyd et al. teach this feature (see col. 8, lines 41-56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Boyd et al.'s teaching into Marinelli in view of Place et al.'s invention because it would provide two relays for transmitting different types of data representing the participant performance to the base station; therefore, the viewer could monitor the participant activities and make better judgment about the participant performance.

5. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Place et al. and Boyd et al. and further in view of Eden et al. (U.S. 5,993,335).

Marinelli in view of Place et al. and Boyd et al. teach the system as stated above except that the event area is a half pipe event area.

Eden et al. teach this feature (see col. 1, line 55 to col. 2, line 7). It would have been obvious to one having ordinary skill in the art at the time the invention was made

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to incorporate Eden et al. teaching into Marinelli in view of Place et al. and Boyd et al. teaching because the sport's arena would be a half pipe area. Therefore, participants would be able to use the ramps of the half pipe to gain speed and perform better rotations to earn better scores.

6. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Place et al. and Shea (U.S. 6,430,453).

Marinelli in view of Place et al. teaches the system as stated above except for a scoreboard and that the base station displays at least one performance metric on the scoreboard.

Shea teaches this feature (see col. 1, line 55 to col. 2, line 9 and col. 3, lines 30-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Shea's teaching into Marinelli in view of Place et al.'s invention because the performance scores of the participants would be displayed on a scoreboard. Therefore, viewers would be able to compare scores to determine the one among the participants who performed the best.

7. **Claims 32-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marinelli in view of Place et al. and Mickelson (U.S. 6,163,021).

Marinelli in view of Place et al. teaches the system as stated above except that the sensing unit includes one or more magnetic field sensing device.

Mickelson teaches a magnetic field sensing device (see col. 2, line 36 to col. 3, line 20 and col. 3, line 58 to col. 4, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Mickelson's

into Marinelli in view of Place et al.'s invention, because the magnetic field sensor would provide an electrical signal that represents the angular orientation of the participant relative to the reference axis, therefore the pitch and the roll angles would be determined in addition to the performance metric parameters of interest to better analyze the participant's performance.

***Response to Arguments***

8. Applicant's arguments filed 2/13/07 have been fully considered but they are not persuasive.

Applicant argues that Marinelli does not teach a relay unit at all.

Examiner disagrees with the Applicants argument because Marinelli teaches teaches relaying the data (see col. 18, lines 45-49).

Applicant argues that Kumar '471 teaches that the transfer unit meant to be within 1-1.5 meter.

Examiner disagrees with the Applicant's argument because Kumar is not used in this office action.

Applicant argues that Place indicates that wires must be used to communicate data between a sensor and the transfer unit if the two are more than 1-1.5 meters apart.

Examiner can't find this statement in Pace reference.

Applicant argues that the present application is classified in class 702 and Boyd reference is classified in class 358. Therefore, Boyd is not analogous art.

Examiner disagrees with the Applicant argument because the Examiner can use references even if they are classified in different classes as long as they teach the subject matter claimed in the application being examined.

Applicant argues that the present application is classified in class 702 and Eden reference is classified in class 437. Therefore, Eden is not analogous art.

Examiner disagrees with the Applicant argument because the Examiner can use references even if they are classified in different classes as long as they teach the subject matter claimed in the application being examined.

Applicant argues that Shea fails to teach sensing units for attachment with participants in a competitive event.

Examiner disagrees with the Applicants argument because Shea reference is incorporated because it teaches the scoreboard and the base station for displaying the performance data.

Applicant argues that Mickleson fails to teach a relay unit proximate to an event area, that receives wireless data from a sensor.

Examiner disagrees with the Applicants argument because Mickleson reference is incorporated because it teaches that the sensing unit includes at least one magnetic field sensing device.

Applicant argues that the present application is classified in class 702 and Mickleson reference is classified in class 244. Therefore, Mickleson is not analogous art.

Examiner disagrees with the Applicant argument because the Examiner can use references even if they are classified in different classes as long as they teach the subject matter claimed in the application being examined.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



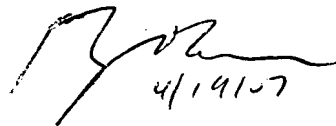
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

4/18/07

BRYAN BUI  
PRIMARY EXAMINER



4/19/07



<b>Notice of References Cited</b>	Application/Control No. 09/607,678	Applicant(s)/Patent Under Reexamination VOCK ET AL.	
	Examiner Mohamed Charioui	Art Unit 2857	Page 1 of 1

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,148,271	11-2000	Marinelli, Dave	702/141
*	B	US-6,450,953	09-2002	Place et al.	600/300
*	C	US-6,292,213	09-2001	Jones, Michael J.	348/61
*	D	US-5,023,727	06-1991	Boyd et al.	386/39
*	E	US-5,993,335	11-1999	Eden et al.	473/471
*	F	US-6,430,453	08-2002	Shea, Michael J.	700/91
*	G	US-6,163,021	12-2000	Mickelson, Wilmer A.	244/3.2
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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#### NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



## UNITED STATES PATENT AND TRADEMARK OFFICE

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 Alexandria, Virginia 22313-1450  
 www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 1240

<b>SERIAL NUMBER</b> 09/607,678	<b>FILING OR 371(c) DATE</b> 06/30/2000 <b>RULE</b>	<b>CLASS</b> 702	<b>GROUP ART UNIT</b> 2857	<b>ATTORNEY DOCKET NO.</b> 388051
<b>APPLICANTS</b> Curtis A. Vock, Boulder, CO; Perry Youngs, Longmont, CO; Adrian Larkin, Boulder, CO;				
<b>** CONTINUING DATA *****</b> This appln claims benefit of 60/141,794 06/30/1999 <i>MC</i>				
<b>** FOREIGN APPLICATIONS *****</b> <i>None, MC</i>				
<b>IF REQUIRED, FOREIGN FILING LICENSE GRANTED</b> <b>** 08/21/2000</b>				
Foreign Priority claimed <input type="checkbox"/> yes <input checked="" type="checkbox"/> no 35 USC 119 (a-d) conditions <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after met Verified and Acknowledged <i>Mohamed Sheri</i> <i>MC</i> Examiner's Signature Initials		<b>STATE OR COUNTRY</b> CO	<b>SHEETS DRAWING</b> 10	<b>TOTAL CLAIMS</b> 34
			<b>INDEPENDENT CLAIMS</b> 4	
<b>ADDRESS</b> 30955				
<b>TITLE</b> Event and sport performance methods and systems				
<b>FILING FEE RECEIVED</b> 575	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit	

# Index of Claims



Application/Control No.

09/607,678

Examiner

Mohamed Charioui

Applicant(s)/Patent under Reexamination

VOCK ET AL.

Art Unit

2857

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
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N	Non-Elected
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A	Appeal
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Claim		Date									
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**Search Notes**

Application/Control No.

09/607,678

Examiner

Mohamed Charioui

Applicant(s)/Patent under  
Reexamination

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Art Unit

2857

**SEARCHED**

Class	Subclass	Date	Examiner
702	56, 122, 141, 142, 145, 149	7/29/2002	MC
702	160, 165	7/29/2002	MC
702	178, 183	7/30/2002	MC
702	187, 188	7/30/2002	MC
340	937	7/31/2002	MC
701	119	2/24/2003	MC
482	8	2/24/2003	MC
348	157-159	2/24/2003	MC
340	870.3	5/17/2004	MC
455	11.1	5/17/2004	MC
Search	updated	9/5/2006	MC
Search	updated	4/18/2007	MC

**INTERFERENCE SEARCHED**

Class	Subclass	Date	Examiner

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
Consulted with Craig Miller	7/22/2002	MC
Consulted with Hal Wachsman	7/29/2002	MC
East: ((base adj station) or (remote adj location)) and relay and cameras	7/29/2002	MC
East: (camera and speed and remote and display)	7/30/2002	MC
East: station and (senses or sensor or sensors or sensing or measuring or measurements or transducer or transducers) and	5/17/2004	MC
(athlete or athletes or competition or competitions or competitor	5/17/2004	MC
competetors or runner or driver or racer or runners or drivers or racers) and wireless and (sport or sports) and distance	5/17/2004	MC
East: repeaters and relay\$6 and ((base or central) adj station)	5/17/2004	MC

**Search Notes (continued)**

Application/Control No.

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Applicant(s)/Patent under  
Reexamination

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**SEARCHED**

Class	Subclass	Date	Examiner

**INTERFERENCE SEARCHED**

Class	Subclass	Date	Examiner

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
East: ((display or displays or displayed or displaying) with (real-time or "Real time") with (speed or speeds or rotation or	5/17/2004	MC
rotations)) and ((wireless) with (sensor or sensors or transducer or transducers or accelerometer or accelerometers))	5/17/2004	MC
East: relay\$6 near wireless near receiv\$6	5/17/2004	MC
Search updated	9/5/2006	MC
East: (relay\$6 with sensor\$1 with (transmi\$6 or receiv\$6) with wireless\$6) and (participant\$1 or competetor\$1 or athlete\$1)	9/5/2006	MC
East: (relay\$6 with sensor\$1 with wireless\$6) and (participant\$1 or compet\$10 or athlete\$1 or patient\$1)	9/5/2006	MC
Search updated	4/18/2007	MC